

**What is claimed is:**

1. Process for the removal of polysulfanes from crude gas formed during the production of hydrogen sulfide, characterized in that the crude gas, with a content of > 80 vol.% H<sub>2</sub>S and > 100 to 2000 vpm, especially > 400 to 1500 vpm polysulfanes (H<sub>2</sub>S<sub>n</sub> with n: 2 to 8), is passed through a washer system, brought into contact there with water and/or methanol and a pure gas is obtained.
- 10 2. Process according to claim 1, characterized in that a 0.5 to 20 wt.% aqueous and/or methanolic solutions of an alkali or alkaline earth hydroxide or oxide is used as washing fluid.
- 15 3. Process according to claim 1, characterized in that 1 to 20 wt.% aqueous and/or methanolic solutions of organic amines of the general formula (C<sub>n</sub>H<sub>2n+1</sub>)<sub>x</sub>NH<sub>y</sub> with n=1,2,3; x=2,3; y=0,1; amino alcohols of the general formula (C<sub>n</sub>H<sub>2n+1</sub>O)<sub>x</sub>NH<sub>y</sub> with n=1,2,3; x=2,3; y=0,1 or ammonia are used as washing fluid.
- 20 4. Process according to one or more of claims 1 to 3, characterized in that a jet washer is used.
5. Process according to claims 1 to 4, characterized in that the pre-purified gas is after-treated in a counter-current washer with aqueous or methanolic solutions.
- 25 6. Process according to claims 1 to 4, characterized in that the gas depleted in polysulfanes is passed through an adsorber bed.
6. Process according to claims 1 to 4, characterized in that the gas depleted in polysulfanes is passed through an adsorber bed.
7. Process according to one or more of claims 1 to 6, characterized in that the polysulfanes contained in the crude gas are depleted in the pure gas at a rate of > 50 to > 99.5%, based on the crude gas.

8. Process according to one or more of claims 1 to 7, characterized in that the process is carried out at a temperature of 0 to 150°C.